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IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1979

No. 79-1058

CHAMPION SPARK PLUG COMPANY,

Petitioner,

v.

THE GYROMAT CORPORATION,

Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

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IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1979

No.

CHAMPION SPARK PLUG COMPANY,

Petitioner,

v.

THE GYROMAT CORPORATION,

Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

Champion Spark Plug Company, petitions that a writ of certiorari issue to review a judgment of the United States Court of Appeals for the Second Circuit, reversing a judgment of the United States District Court for the District of Connecticut which held claim 5 and 7 of United States Patent No. 3,219,276 invalid.

OPINIONS BELOW

The opinion of the District Court is reported at ___ F.Supp. ___, 200 USPQ 666 and its Memorandum of Decision and Judgment are printed in the appendix hereto, infra. The opinion of the Court of Appeals is reported at ___ F.2d ___, 202 USPQ 785 and is also printed in the attached appendix.

JURISDICTION

The judgment of the Court of Appeals was entered on July 2, 1979. A timely petition for rehearing was denied on October 5, 1979. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

QUESTION PRESENTED

Whether the standard of invention defined by Section 103 of Title 35 of the United States Code requires that the only art which may be considered in determining the validity of a patent is that prior art which discloses the invention defined by the patent claims.

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

The eighth clause of Article 1, Section 8 of the United States Constitution and Sections 102 and 103 of Title 35 of the United States Code are involved herein and are printed in the appendix hereto.

STATEMENT OF THE CASE

Trial was had in the District Court below on November 16, 1976. The District Court, on October 18, 1978, issued a detailed Memorandum of Decision and a Judgment in favor of petitioner declaring claims 5 and 7 of United States Patent No. 3,219,276 in suit invalid and unenforceable. Respondent appealed from the District Court below to the United States Court of Appeals for the Second Circuit. On July 2, 1979, the Court of Appeals below entered its opinion, reversing the District Court and remanding the case for further proceedings.

The claims in issue in this cause (claims 5 and 6) are limited in scope, since they are dependent claims from two broader claims (claims 3 and 4) which were disclaimed by Respondent during previous unrelated litigation.[1]

The dependent claims in litigation define the invention to be a vertically reciprocating fluid regulator controlled remotely by a stationary air pressure regulator connected to the vertically reciprocating regulator by a flexible coupling. The Second Circuit Court of Appeals, in reversing the trial court's holding of invalidity, found that the statutory presumption of validity had not been successfully rebutted by Petitioner because no evidence of record discloses the claimed *invention* of remotely controlling a vertically reciprocating fluid pressure regulator with a stationary air pressure regulator.

The Court of Appeals below reached its decision, notwithstanding the fact that the prior art in evidence invludes traveling, vertically reciprocating fluid pressure regulators which are locally adjustable (the subject matter of the dedicated claims) and stationary fluid pressure regulators remotely controlled by stationary air regulators.

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[1] *Gyromat Corp. v. H. G. Fisher & Co.*, ___ F.Supp. ___, 167 USPQ 326 (N.D. Ill., 1970).

The Court of Appeals found that respondent's patent in suit was valid under section 103 of the patent statute because the prior art presented to prove the claims obvious did not singularly disclose the *invention* of those claims as defined by section 102. The decision below by the Courts of Appeals therefore effectively eliminates section 103 of the patent statute from judicial considerations of patentability. The opinion of the Court of Appeals is thus contrary to the many interpretations of section 103 rendered by this court.

REASONS FOR GRANTING THE WRIT

This petition raises an important question of federal law concerning the application of section 103 of Title 35 of the United States Code which has been raised in part by a division of opinion among the Circuit Courts of Appeals as to the meaning of this Court's decision rendered in *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976).

1. THE PATENT STATUTE AND ITS BACKGROUND

The Patent Statute, Title 35, was enacted in 1952. In both the Senate and House reports on the then proposed legislation it was stated:

> "Section 101 sets forth the subject matter that can be patented, 'subject to the conditions and requirements of this Title'. The conditions under which a patent may be obtained follow, and section 102 covers the conditions relating to novelty."[2]

[2]See, Edwards' *Efforts To Establish a Statutory Standard of Invention* Study No. 7, subcommittee on patents, trademarks and copyrights.

Section 103 of the Patent Act, the Senate and House reports state:

> "Section 103, for the first time in our statute, provides a condition which exists in the law and has existed for more than 100 years, but only by reason of decisions of the Courts. An invention which has been made, and which is new in the sense that the same thing has not been made before, may still not be patentable if the difference between the new thing and what was known before is not considered sufficiently great to warrant the patent. That has been expressed in a large variety of ways in decisions of the Courts and in writings. Section 103 states this requirement in the title. It refers to the difference between the subject matter sought to be patented and the prior art, meaning what was known before as described in section 102. If this difference is such that the subject matter as a whole would have been obvious at the time to persons skilled in the art, then the subject matter cannot be patented."[3]

It is clear, from the above, that in the 1952 Act Congress enacted a comprehensive statute which explicitly delineates the "conditions and requirements" for patentability to include, in addition to novelty (§ 102), an expressly defined statutory requirement for "invention" under section 103. That the patent statute defines a dual requirement of novelty (§ 102) and a lack of obviousness (§ 103) in order for an invention to be validly patented has been beyond debate until the present decision of the Court of Appeals below in this case.

[3]F. Rep. No. 1979, 82nd Cong., 2d Sess. 6 (1952); H.P. Rep. No. 1923, 82nd Cong., 2d Sess. 5 (1952).

2. THIS COURT'S INTERPRETATIONS OF SECTION 103 OF TITLE 35, UNITED STATES CODE

This Court, through its opinion in *Graham v. John Deere*, 383 U.S. 1 (1966), defined a three-pronged test to aid in determining whether an invention is "obvious" under section 103 of the Patent Statute. Under the *Graham* decision the determination of obviousness is made by determining the scope and content of the prior art at the time the claimed invention was made; the differences between the art and the claims; and the level of ordinary skill in the art.[4] Under the rationale of the *Graham* decision, if the prior art at the time the invention was made is pertinent to the invention; the differences between that art and the invention are few; and the level of ordinary skill in the art could have easily encompassed the invention; the patent claims under consideration are invalid, being "obvious" under section 103.

Subsequent opinions of this Court appear to have ratified the *Graham* decision and only amplified the ramifications of the three-pronged test.[5]

The various circuits within the United States applied the *Graham* test with apparent uniformity until this Court rendered its opinion of *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976). Several of the Circuit Courts of Appeals have viewed the *Sakraida v. Ag Pro* decision to to define a rigorous standard against which validity of combination patents is measured. The ultimate extension of this first view of the *Sakraida* decision would sweep away virtually all patents claiming a new combination of mechanical elements. These Circuits interpret the

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[4] 383 U.S. 1 at p. 17.

[5] See, for example, *Anderson Black Rock, Inc. v. The Pavement Salvage Co.*, 396 U.S. 57 (1969).

Sakraida opinion to require the existence of a synergistic effect before a combination patent can be held valid.[6] At least one Circuit has taken the position that the existence of "synergism" is the overriding test when taken in conjunction with the *Graham* test. See *Satco, Inc. v. Transequip*, supra.

Other Circuits have taken a contrary view of the *Sakraida* decision and hold that the concept of synergism is irrelevant to considerations of validity of combination mechanical patents.[7]

The Court of Appeals below in rendering its decision adopted the latter interpretation of the *Sakraida* decision and held that no rule of synergism was announced therein. In rejecting the synergism standard, the Court below (either through its own interpretation of the *Sakraida* decision or through an overreaction to the interpretations of that decision which threaten to sweepingly invalidate all mechanical combination patents) has swung the pendulum toward validity so far as to eliminate the statutory standard of obviousness as defined by section 103 of the patent statute, implicitly requiring

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[6] See, for examples, *Reinke Mfg. v. Sidney Mfg.*, 594 F.2d 664, 201 USPQ 344 (C.A. 8, 1979); *Heschensohn v. Hoffman*, 593 F.2d 893, 201 USPQ 721 (C.A. 9, 1979); *SSP v. Orchard-Rite*, 592 F.2d 1096, 202 USPQ 1 (C.A. 9, 1979); *Satco, Inc. v. Transequip*, 594 F.2d 1318, 202 USPQ 576 (C.A. 9, 1979); *Lawrence v. Gillette*, ___ F.2d ___, 203 USPQ 732 (C.A. 9, 1979), and *True Temper v. CF&I*, 601 F.2d 495, 202 USPQ 412 (C.A. 10, 1979).

[7] See, for examples, *Burndy Corp. v. Kearney National, Inc.*, 466 F.2d 580, 201 USPQ 801 (C.A. 2, 1979); *Haig Products, Inc. v. K. O. Lee Co.*, 594 F.2d 609, 201 USPQ 654 (C.A. 7, 1979); *Lee Blacksmith v. Lindsay Bros., Inc.*, ___ F.2d ___, 203 USPQ 211 (C.A. 7, 1979); and *AMP v. Bunker-Ramo*, ___ F.2d ___, 203 USPQ 324 (C.A. 7, 1979).

only that the subject of the patent be "novel" as defined by section 102 of Title 35.

If those Circuits' interpretations of the *Sakraida* opinion, which find a requirement for synergism, incorrectly abolish all combination patents, then the present opinion of the Court of Appeals below correlatively incorrectly upholds the validity of patents which are novel for purposes of 102 but are nevertheless obvious under section 103.

In either event, the various Circuits' interpretations of the *Sakraida v. Ag Pro, Inc.* opinion have modified the test for patentability under section 103 of the Patent Act as defined by this Court's decision of *Graham v. John Deere,* supra.

IMPORTANCE OF QUESTION

The various Circuits' interpretations of the *Sakraida v. Ag Pro* decision have modified standards for judicial determinations of patentability under section 103 of the Patent Act. If the three-prong test for obviousness as defined by the *Graham* decision is to be modified, either in the direction requiring a synergism test or in the direction adopted by the Court of Appeals below greatly limiting the scope of prior art which can be considered under section 103 of the Patent Act, the *Graham* decision should be expressly modified by this Court. Because of the Circuit Courts' conflicting views of the impact of the *Sakraida* decision, there exists a variance in the enforceability of patents which causes litigants to forum-shop in support of their specific interests. Resolution of the question raised by this petition will resolve the existing conflict among the federal jurisdictions with respect to the *Sakraida* decision.

CONCLUSION

For the reasons stated, this Petition for a Writ of Certiorari should be granted.

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APPENDIX

APPENDIX A

UNITED STATES DISTRICT COURT
DISTRICT OF CONNECTICUT

Civil No. 15,087

CHAMPION SPARK PLUG COMPANY

v.

THE GYROMAT CORPORATION

MEMORANDUM OF DECISION

As narrowed prior to and during the trial, this suit involved the request of plaintiff Champion Spark Plug Company for a declaratory judgment of invalidity of claims 5 and 6 of U.S. Patent 3,219,276 owned by defendant The Gyromat Corporation and defendant's counterclaim for damages for plaintiff's infringement of these two claims of the '276 patent. Defendant also seeks treble damages and attorney's fees, if it prevails, for plaintiff's allegedly willful and wanton conduct in infringing the patent and "retaliating" against defendant economically for asserting the claim of infringement.

The '276 patent concerns aspects of an electrostatic paint spraying device. Several features of the device, not alleged to be covered by the two claims in suit, must be understood to put the claims in perspective. The device consists of paint spray guns mounted on a vertical bar, which moves up and down a distance of about one foot. This reciprocating motion of the bar causes the spray guns to move up and down to facilitate application of

the paint through a greater vertical dimension than would be covered if the guns were stationary. Additional coverage through the vertical dimension is accomplished by mounting additional guns along the bar. Coverage through the horizontal dimension is accomplished by moving the objects to be painted past the paint spraying device, usually suspended from a conveyor belt. To promote uniform paint coverage, the objects to be painted are given an electrical charge, and an opposite charge is applied to the finely atomized particles of paint spray as they leave the spray guns.

Claims 3 and 4 of the '276 patent, which have been disclaimed in this suit, concern a means for controlling the pressure of the paint spray as it leaves the guns. The paint supply is itself under a pressure applied to the containers of the paint supply. Regulating the paint spray pressure is accomplished by mounting a control valve on the reciprocating bar, one valve for each gun.[1] The control valve, also called a traveling fluid regulator or a primary pressure regulator, enables the operator to select a desired output pressure at the gun nozzle. Among the advantages of locating the fluid regulators on the reciprocating bar is that they substantially eliminate

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[1]The '276 patent contains a diagram showing two spray guns at each height where discharge of spray paint is wanted. The guns are mounted one above the other, with the top gun pointed downward at about 45 degrees and the bottom gun upward at the same angle. Apparently the resulting intersection of the spray from the pair of guns achieves a more desirable effect than that occurring if a single gun were pointed straight at the target, *i.e.*, horizontally. One control valve is supplied for each pair of guns. No issue in this case is affected by whether a single gun or a pair of guns with intersecting sprays is mounted at selected heights along the reciprocating bar. For convenience, the discussion that follows will refer to an arrangement in which a single gun is located at each height.

the variation in output pressure that would otherwise occur as the spray guns move up and down through a one-foot distance. This movement would cause a 1/2 pound per square inch variation in output pressure if the fluid regulators did not reciprocate with the guns.

Claims 3 and 4 set forth the features thus far described as follows:

> 3. Spraying apparatus comprising a vertical support, means causing vertical reciprocation of said support, a spray head carried by said support, a control valve on said support connected to said nozzle and having means supplying spray material to said nozzle at a predetermined constant pressure, a stationary source supplying spray material at a predetermined pressure, and means supplying said spray material from said source to said control valve at a pressure determined by the pressure of said source and by the pressure head between the source and said control valve which varies according to the elevation of said reciprocating valve.
>
> 4. Spraying apparatus according to claim 3 in which said control valve includes means for adjusting the predetermined pressure at which the spray material is supplied therefrom to said nozzle.

Claims 5 and 6, the ones in issue in this suit, concern the problem of how to change the level of pressure applied by the traveling fluid regulator to the paint spray. Changes may be desired for various reasons including the operator's observance that an initially selected pressure is not achieving a desired quality of result. If the device is stopped and the high voltage turned off, the fluid regulator can be adjusted manually. Plainly a greater challenge is presented by the need to adjust the fluid regulator while the device is operating, *i.e.*, with the regulator

moving up and down and with high voltage being supplied to a component of the device.

The solution described in claims 5 and 6 is a remotely controlled pressure regulator connected to the traveling fluid regulators by insulated, flexible tubing. In essence, one pressure regulator is attached to another pressure regulator. The secondary pressure regulator is controlled at a control panel. The operator selects a desired pressure, thereby controlling the pressure of a flow of air moving from the secondary regulator to the primary regulator. Variation in this air pressure remotely controls the pressure applied by the primary (traveling) regulator, thereby accomplishing a change in the pressure of the paint spray.

Claims 5 and 6 set forth this remote control arrangement as follows:

> 5. Apparatus as set forth in claim 4 in which said adjusting means comprises a pressure actuated diaphragm and means including a remote pressure control valve connected to control the pressure applied to said diaphragm for thereby varying the pressure supplied by said first control valve to said nozzle.
>
> 6. Apparatus as set forth in claim 5 in which said pressure control valve is connected to said first control valve by a flexible coupling having insulating characteristics and an electrostatic potential is applied to said nozzle for charging the spray material ejected therefrom.[2]

Gyromat does not contend that invention lies in the selection of materials to accomplish the remote control

[2]While claim 6 refers to application of an electric charge to the nozzle, defendant acknowledges that electrostatic paint spraying is old in the art and is not a patentable feature of the '276 patent.

of the traveling regulator. Flexible, insulated couplings are old in the art. Nor does Gyromat contend that invention lies in remotely controlling one pressure regulator by another pressure regulator, at least where the primary regulator is stationary. What Gyromat does assert is that the remote control mechanism of claims 5 and 6 constitutes a patentable invention because prior thereto no one had ever thought to control remotely a *moving* pressure regulator by a stationary pressure regulator. Assessment of this contention must begin with consideration of prior litigation involving the '276 patent.

Claims 5 and 6 of the '276 patent were declared valid in *The Gyromat Corporation v. H. G. Fischer & Company*, 167 U.S.P.Q. 326 (N.D. Ill. 1970). Claims 3 and 4 were initially in suit in the *Fischer* litigation, but were disclaimed by Gyromat in the face of evidence that one year before the October 16, 1962, filing date of the '276 patent the Fischer Company had used an electrostatic paint spraying device with spray guns and pressure regulators mounted on the reciprocating portion of the device. That disclaimer, as in this case, left for consideration claims 5 and 6 concerning the remote control aspect of the traveling pressure regulators.

In *Fischer* the arguably relevant prior art cited to the Court consisted of three pressure regulating devices controlled by a variable supply of air pressure.[3] In considering the significance of this prior art, Judge Hoffman focused on the absence of a suitable means for smoothly effecting a downward adjustment of pressure.

[3]A fourth item, U.S. Patent 2,773,507, involved the intermittent application of solvent to the paint mixture to maintain the desired viscosity. The '507 patent is totally irrelevant to the issues in *Fischer* and the instant suit.

When air pressure is increased to increase pressure on the primary regulator, some means must be provided for eliminating the increased pressure in the air line in order to effect a reduction. A common device is a bleed hole, which permits the air to escape. Two of the remotely controlled regulators cited in *Fischer* contained no bleed holes or equivalent relieving means, and the third was clearly not suitable for a paint spraying device since the bleeding means was placed in a portion of the system that corresponded to the paint line of a spray paint device.

The omission of a suitable bleed mechanism was plainly important to Judge Hoffman:

> None of the prior art references submitted by the defendant provided for dynamic regulation through the provision of a bleed passage. A necessary feature of a remote controlled paint pressure regulating system for a reciprocating apparatus is the provision of a small bleed passage in the air system, between the manually controlled, stationary air pressure regulator and the reciprocating paint pressure regulator. Such a bleed passage facilitates dynamic control, permitting precisely controlled regulation of the paint pressure both upward and downward, and also avoiding a gradual increase in the paint pressure during operation of the equipment. Such a bleed passage is fully disclosed in the '276 patent.

167 U.S.P.Q. at 340–41. His ultimate conclusion as to non-obviousness rested in part on the bleed device disclosed in the '276 patent:

> The provision of a manually controlled air pressure regulator, with a continuously bled regulated output, for effecting the precise control of paint pressure in a reciprocating spray apparatus was not "obvious" within the meaning of 35 U.S.C. § 103.

Ibid.

Gyromat contends that the *Fischer* decision upholding claims 5 and 6 should be accorded not only persuasive *stare decisis* effect, see *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 258 F.2d 124 (2d Cir. 1958), but nearly the preclusive effect that would result from a prior decision of invalidity, *Blonder-Tongue Labs., Inc. v. University of Illinois Foundation*, 402 U.S. 313 (1971). See *Columbia Broadcasting System, Inc. v. Zenith Radio Corp.*, 391 F.Supp. 780 (N.D. Ill. 1975). But even *Zenith Radio* recognized that whatever burden rests on the party challenging a prior adjudication of patent invalidity can be overcome by evidence that relevant prior art was not considered in the first litigation. Champion seeks to shoulder that burden here by prior art references disclosing bleed holes and other relieving mechanisms in pressure regulating devices. It is not necessary to analyze these references in detail because there is no dispute between the parties as to what they disclose and what they do not disclose. The dispute concerns their significance. The parties agree that the references disclose bleed holes and other relieving mechanisms in devices to regulate pressure. There is also no dispute that the references disclose pressure regulators, with relieving features, in use as devices to control pressure at a remote point from the primary regulator. What the references do not disclose is a pressure regulator remotely controlling pressure on a primary regulator that is not stationary, a component, like the traveling fluid regulator in the patent in suit that reciprocates through a vertical plane.

Thus the issue is whether the combination of two components, a self-relieving pressure regulator and a reciprocating fluid regulator, was obvious within the meaning of § 103 of the Patent Act in 1962. Each component was well-known. Also well-known was the combination of a self-relieving pressure regulator con-

nected to a stationary fluid regulator. Was it "obvious" to decide to connect a self-relieving pressure regulator to a reciprocating fluid regulator?

A combination of known elements with each performing the same function it had been known to perform is not patentable. *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976); *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 61 (1969); *Great A&P Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 (1950). The combination must produce a "new or different function," *Anderson's-Black Rock, Inc. v. Pavement Salvage Co., supra,* 396 U.S. at 60. If the concept of function is limited to the physical properties of the components, the pressure regulator of the patent in suit performs the same function it had previously been known to perform with stationary fluid regulators when it is connected to a reciprocating fluid regulator. It delivers variable pressure and thereby permits controlled variation of the fluid pressure. But function cannot always be limited to physical properties. There can be situations where a component performs a well-known physical task, but does so in a context so different from that of any of its prior uses that the selection of the component can properly be considered a non-obvious invention.

There is no litmus test to be applied, and the benefit of hindsight is properly to be discounted. See *Goodyear Tire & Rubber Co. v. Ray-O-Vac Co.*, 321 U.S. 275 (1944). The traditional inquiry focuses on the scope and content of the prior art, the differences between the prior art and the claims, and the level of ordinary skill in the pertinent art. *Graham v. John Deere Co.*, 383 U.S. 1 (1966). In this case the evidence, particularly of plaintiff's expert, Russell Henke, is persuasive that in 1962

the idea of connecting a pressure regulator to a reciprocating fluid regulator required no more than the ordinary skill of a mechanic reasonably knowledgeable in the field of hydraulics and fluid controls. While the combination of components achieved a useful result, it was the same result to be expected whenever a fluid regulator is remotely controlled by a pressure regulator. The fact that the fluid regulator is reciprocating presented no special problem either in deciding to use a remotely controlled pressure regulator or selecting means to accomplish its connection. The evidence was undisputed that non-conductive tubing, such as is used to connect the pressure regulator to the fluid regulator, was well-known.

Obviously not every change in the context in which a pressure regulator is connected to a fluid regulator produces a patentable invention. Such a combination operating at high temperatures, or at high altitudes, or in a device moving at high speeds would in a limited sense be different from the combination as disclosed in the prior art. But such differences in context would not indicate that the combination was performing a new function. That the fluid regulator in the patent reciprocates while the secondary pressure regulator remains stationary is not, on the evidence presented, a sufficiently different change in the context in which the combination of components operates to be considered a new function or a non-obvious improvement.

Defendant offers two circumstances to attack this conclusion. First, it suggests that Henke's testimony concerning the level of ordinary skill in 1962 should be disregarded or at least discounted because he made no independent investigation concerning the level of ordinary skill of those involved in the paint spraying

art in 1962. But the problem confronting users of the reciprocating paint spraying device in 1962 did not concern the spraying of paint, it concerned the regulation of liquid pressure from a remote point. The pertinent skill to solve this problem was in the field of hydraulics and fluid pressure. Of course, the skilled mechanic from that field, selecting the well-known device of a remote-controlled pressure regulator, could not ignore the fact that the liquid whose pressure was to be regulated was paint. For example, he could not use a device that placed the bleed hold for the pressure regulator system within the line carrying paint. But that precaution required no expertise in paint spraying. Preventing leakage of the fluid ultimately to be controlled was necessary whether it was paint or any other fluid.

The second ground of attack arises from the failure of plaintiff to come up with the idea of attaching a pressure regulator to the traveling fluid regulator until after its personnel had seen this arrangement at the Fischer Company. In particular, defendant relies on contemporaneous reports prepared by plaintiff's officials considering the use of fluid regulators and rejecting them. But as the report points out (Ex. U), they were rejected because it was thought necessary to "reciprocate the fluid regulators with the guns" and "fluid regulators had been rejected because of their bulk, cost and incompatability with quick color change." All Exhibit U indicates is that plaintiff failed to think a traveling fluid regulator was feasible, but that component is disclosed in claim 4, which has been disclaimed because it was previously used by Fischer. There is no evidence that plaintiff's staff was using a traveling fluid regulator but was unable to come up with a device for remotely controlling it. It is true that the Fischer personnel, who were using a traveling fluid regulator, did not solve the problem. However, their failure, for a somewhat brief time, is insufficient to detract from the weight of the plaintiff's credible testimony that use of a remote-controlled pressure regulator to control the traveling fluid regulator required no more than the ordinary skill of a mechanic.

In *Fischer* the Court was understandably impressed with the comparison between the benefits of the '276 patent and the lack of success of Fischer personnel, who on occasion were reported to be "jabbing or poking at the handle of the reciprocating regulator with an object such as a broomstick." 167 U.S.P.Q. at 341. Those episodes, in the context of the record developed by another party in the *Fischer* litigation, led to a conclusion that the invention disclosed in claims 5 and 6 was not obvious. The augmented evidence presented here by the plaintiff of pertinent prior art disclosing continuously bled pressure regulators and persuasive testimony concerning the obviousness of remotely controlling a fluid regulator (whether stationary or reciprocating) with a pressure regulator leads to an opposite conclusion.

Since there is no finding for the party claiming infringement, defendant's further claims for treble damages under 35 U.S.C. § 284 and for attorney's fees under 35 U.S.C. § 285 are moot.

Accordingly, judgment may enter for the plaintiff, declaring claims 5 and 6 of U.S. Patent 3,219,276 invalid and unenforceable.

Dated at Hartford, Connecticut, this 12th day of October, 1978.

/s/ Jon O. Newman
United States district Judge

JUDGMENT ON DECISION BY THE COURT

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF CONNECTICUT

[Filed: Oct. 13, 1978]

Civil Action File No. 15,087

CHAMPION SPARK PLUG COMPANY

v.

THE GYROMAT CORPORATION

JUDGMENT

This action came on for trial before the Court, Honorable Jon O. Newman, United States District Judge, presiding, and the issues having been duly tried and a decision having been duly rendered, on October 13, 1978,

It is Ordered and Adjudged that judgment be and is hereby entered in favor of the plaintiff, declaring claims 5 and 6 of U.S. Patent 3,219,276 invalid and unenforceable.

Dated at New Haven, Connecticut, this 13th day of October, 1978.

SYLVESTER A. MARKOWSKI
Clerk of the Court

/s/ Frances J. Consiglio
Deputy in Charge

APPENDIX B

UNITED STATES COURT OF APPEALS

FOR THE SECOND CIRCUIT

No. 823—August Term, 1978.

(Argued May 3, 1979 Decided July 2, 1979.)

Docket No. 78-7556

CHAMPION SPARK PLUG COMPANY,

Plaintiff-Appellee,

—v.—

THE GYROMAT CORPORATION,

Defendant-Appellant.

Before:

GURFEIN and MESKILL, *Circuit Judges,*
and MILLER, *Judge.**

Appeal from the judgment of the United States District Court for the District of Connecticut (the Hon. John O. Newman, *Judge*) entered on plaintiff-appellee's action for a declaratory judgment. Following a nonjury trial, the dis-

* The Honorable Jack R. Miller, United States Court of Customs and Patent Appeals, sitting by designation.

trict court declared claims 5 and 6 of defendant-appellant's patent invalid and unenforceable.

Reversed.

FRITZ L. SCHWEITZER, JR., Mandeville and Schweitzer, New York, N.Y., *for Appellants.*

VINCENT L. BARKER, JR., Toledo, Ohio (David D. Murray and Mark C. Schaffer, Barker, Emch, Schaffer & Todd Co., L.P.A., Toledo, Ohio, of counsel), *for Appellee.*

MILLER, *Judge:*

This appeal is from the decision and judgment (unreported) of the District Court for the District of Connecticut declaring invalid and unenforceable claims 5 and 6 of U.S. Patent No. 3,219,276 ("Plural Nozzles Having Intersecting Spray and Control Therefor"), issued November 23, 1965,[1] to Edward O. Norris, whose rights to the patent were acquired by appellant from the Norris estate following his death in 1968.[2] We reverse.

The Invention

The invention relates to fluid (*e.g.* paint) spraying devices. The essential features, insofar as the involved

1 On application No. 230,867, filed October 16, 1962. Reduction to practice occurred in late December of 1961.

2 Champion Spark Plug Company ("Champion") initiated the action for a declaratory judgment that the Norris patent was invalid and unenforceable. The Gyromat Corporation ("Gyromat") counterclaimed for patent infringement. Champion conceded infringement if the patent was valid.

claims are concerned, are illustrated in Figure 1 of the patent. Devices 29 are spray gun nozzles which issue a fine spray of highly charged particles (*e.g.* paint) toward a workpiece 44 to be sprayed. In order to spray the sur-

[Numbers of other elements of the apparatus have been deleted in the interest of simplification.]

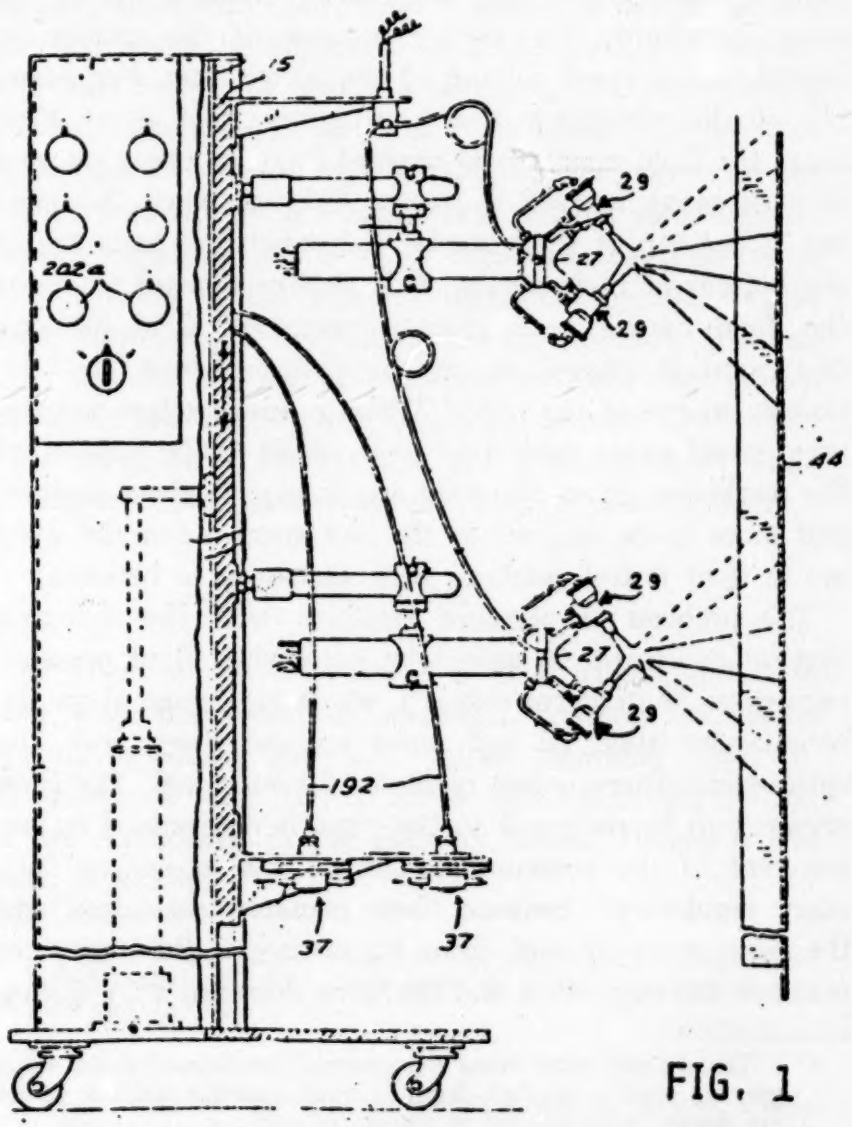

FIG. 1

face of a large workpiece, electrostatic spray guns 27 are moved up and down by means of a reciprocator slide 15. As they move up and down (in relation to a stationary source of spray fluid), the pressure of the spray from the guns varies with the height of the guns, there being a loss of pressure when the reciprocator slide moves the guns upward and a gain in pressure when it moves the guns downward. This occurs because of the change in height of a vertical column of the spray fluid. For example, if the stationary source of spray fluid is at floor level, the fluid must travel upward to reach the guns; and it must move upward a greater distance when the guns are at the top of their stroke than when the guns are at the bottom of their stroke. This greater upward travel of the fluid results in a greater weight of fluid pressing downward in opposition to the pressure from the stationary source of the fluid.[3] Without more, a loss in pressure would cause less fluid (*e.g.* paint) to be applied to the workpiece when the guns are in their highest position and more to be applied to the workpiece when the guns are in their lowest position, with variations in between.

The problem of pressure variation with the changing vertical movement is solved by adjustable, fluid pressure regulators 37 ("control valves"), which are mounted on the reciprocator slide 15 and move up and down with the spray guns. There is one regulator for each gun. The fluid pressure to be delivered to the guns is determined by adjustment of the pressure regulators, also known as "primary regulators." Because these pressure regulators and the guns move up and down together, the fluid pressure *between* the regulators and the guns does not vary during

3 The district court found that vertical movement of the spray guns through a one-foot distance would cause a one-half pound per square inch variation in output pressure.

vertical reciprocation. Although the fluid pressure from the stationary source to the *input* side of the regulators 37 varies during vertical reciprocation, the regulators compensate for such variation, providing a steady pressure at the *output* side for delivery of the fluid to the spray guns.

A standard fluid pressure regulator is adjusted by a manually-controlled knob, thumb screw, or similar device. However, when the apparatus is in operation, such adjustment "on-the-fly" (*i.e.*, without stopping the reciprocating spraying apparatus) is difficult.[4] To meet this problem, the Norris '276 patent replaces the manual control of the primary regulator with a stationary, remote, secondary *air* pressure regulator (202a). This regulates the pressure of air that flows to the primary regulator through flexible plastic tube 192. By adjusting the air pressure, the variable output of the vertically moving primary regulator is controlled, and the control is precise because the weight of the air in tube 192 reamins practically constant while the tube moves up and down with the reciprocator slide.

The Claims

The involved claims 5 and 6 refer to claims 3 and 4, which were disclaimed by appellant Gyromat in earlier litigation involving the '276 patent (*Gyromat Corp. v. H.G. Fisher & Co.*, 167 U.S.P.Q. 326 (N.D. Ill. 1970)), and are reproduced in the footnote below.[5] Claims 5 and 6 read as follows:

4 Appellant notes that the regulators are moving up and down rather rapidly and that "they carry an electrical charge of perhaps 100,000 volts or more."

5 Claims 3 and 4 read as follows:

3. Spraying apparatus comprising a vertical support, means causing vertical reciprocation of said support, a spray head

5. Apparatus as set forth in claim 4 in which said adjusting means comprises a pressure actuated diaphragm and means including a remote pressure control valve connected to control the pressure applied to said diaphragm for thereby varying the pressure supplied by said first control valve to said nozzle.

6. Apparatus as set forth in claim 5 in which said pressure control valve is connected to said first control valve by a flexible coupling having insulating characteristics and an electrostatic potential is supplied to said nozzle for charging the spray material ejected therefrom.

Prior Art

All but two of the essential features of the invention described above are to be found in claims 3 and 4. These features have been disclaimed by appellant, and the parties agree that they may be considered prior art; also appellant does not dispute the district court's findings that the flexible coupling in claim 6 is old in the art. As to a stationary, remote, secondary (air) pressure regulator controlling pressure in a primary regulator that "reciprocates through a vertical plane," the district court found that

carried by said support, a control valve on said support connected to said nozzle and having means supplying spray material to said nozzle at a predetermined constant pressure, a stationary source supplying spray material at a predetermined pressure, and means supplying said spray material from said source to said control valve at a pressure determined by the pressure of said source and by the pressure head between the source and said control valve which varies according to the elevation of said reciprocating valve.

4. Spraying apparatus according to claim 3 in which said control valve includes means for adjusting the predetermined pressure at which the spray material is supplied therefrom to said nozzle.

this was not disclosed by the prior art. With respect to this feature, the district court commented that "the combination of a self-relieving pressure regulator connected to a *stationary* fluid regulator" is "well known." (Emphasis added.)[6]

Proceedings Below

The district court based its determination that claims 5 and 6 were invalid on its holding that the subject matter of the claims was obvious for purposes of 35 U.S.C. § 103.[7] As we have seen, the critical subject matter of both claims is the stationary, remote, secondary pressure regulator controlling pressure in a primary regulator that "reciprocates through a vertical plane."

In declining to follow Judge Hoffman's holding of validity of claims 5 and 6 in *Gyromat Corp. v. H.G. Fisher & Co., supra,* the district court noted that two of the remotely-controlled regulators cited in *Fisher* contained no bleed holes and that "the third was clearly not

6 By "self-relieving pressure regulator," it appears that the district court was referring to a regulator having a "bleed hole" feature to assist the downward variation of pressure upon the fluid regulator. Such a feature is present in appellant's apparatus, but, as appellant points out, it is not a critical feature of the invention and is *not claimed.*

7 35 U.S.C. § 103 provides:

§ 103. *Conditions for patentability; non-obvious subject matter*

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

suitable for a paint spraying device since the bleeding means was placed in a portion of the system that corresponded to the paint line of a spray paint device"; also that Judge Hoffman had rested his conclusion of nonobviousness "in part" on the bleed device disclosed in the Norris '276 patent in stating:

> The provision of a manually controlled air pressure regulator, with a continuously bled regulated output, for effecting the precise control of paint pressure in a reciprocating spray apparatus was not "obvious" within the meaning of 35 U.S.C. § 103.

167 U.S.P.Q at 341. The court below went on to point out that Champion had cited prior art references which the parties agreed disclosed bleed holes in pressure regulating systems. It then said:

> Thus the issue is whether the combination of two components, a self-relieving pressure regulator and a reciprocating fluid regulator, was obvious within the meaning of § 103 of the Patent Act of 1952. Each component was well-known. Also well-known was the combination of a self-relieving pressure regulator connected to a stationary fluid regulator. Was it "obvious" to decide to connect a self-relieving pressure regulator to a [vertically] reciprocating fluid regulator?

Having analyzed the scope and content of the prior art and the difference between the prior art and the subject matter of claims 5 and 6, the district court considered the level of skill of a person of ordinary skill in the art to which said subject matter pertained as of 1962 (the time when the Norris invention was made). *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966). It

found that the pertinent art was "the field of hydraulics and fluid controls," and that the testimony of Champion's expert, Russell Henke, "is persuasive that in 1962 the idea of connecting a pressure regulator to a [vertically] reciprocating fluid regulator required no more than the ordinary skill of a mechanic reasonably knowledgeable in the field of hydraulics and fluid controls."[8]

Stating that the benefit of hindsight is to be discounted,[9] the district court concluded as follows:

> While the combination of components achieve a useful result, it was the same result to be expected whenever a fluid regulator is remotely controlled by a pressure regulator. The fact that the fluid regulator is [vertically] reciprocating presented no special problem either in deciding to use a remotely controlled pressure regulator or selecting means to accomplish its connection. . . .
>
> . . . That the fluid regulator in the patent reciprocates while the secondary pressure regulator remains stationary is not, on the evidence presented, a sufficiently different change in the context in which the combination of components operates to be considered a new function or a non-obvious improvement.

In responding to Gyromat's argument that Champion failed to come up with the idea of attaching a remote pressure regulator to a vertically reciprocating fluid regulator until after its personnel had seen such an ar-

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8 The more precise time for determining obviousness to one of ordinary skill in the art is late December of 1961, when the Norris invention was reduced to practice.

9 *Goodyear Tire & Rubber Co. v. Ray-O-Vac Co.*, 321 U.S. 275 (1944); and others.

rangement constructed by the Fischer Company,[10] the district court said:

> There is no evidence that plaintiff's [Champion's] staff was using a traveling fluid regulator but was unable to come up with a device for remotely controlling it.

Rather, the district court emphasized that Champion had rejected traveling fluid regulators for reasons unrelated to the problem of fluid adjustment.

Finally, the court, recognizing that the district court in *Fischer* "was understandably impressed with the comparison between the benefits of the '276 patent and the lack of success of Fischer personnel," stated that it had reached the opposite conclusion on the basis of "augmented evidence presented here . . . of pertinent prior art disclosing continuously bled pressure regulators and persuasive testimony concerning the obviousness of remotely controlling a fluid regulator (whether stationary or reciprocating) with a pressure regulator . . . ."

OPINION

Presumption of Validity

Before the district court, Champion stated that "the prior art evidence to be produced . . . was not considered by the Patent Office and the presumption [under 35 U.S.C. § 282] is thus undercut or substantially weakened." However, the district court did not mention the statutory presumption of validity of the Norris '276 patent.[11] In-

10 This was the Norris invention found to have been infringed by Fischer in *Gyromat Corp. v. H.G. Fischer & Co., supra.*

11 Champion raises this point in its brief before this court. In addition to prior art disclosing pressure regulators with a bleed feature, which we consider irrelevant, *infra,* it cites the following:

stead, it disposed of the holding of validity of claims 5 and 6 in *Gyromat Corp. v. H.G. Fischer & Co., supra,* on which Gyromat has heavily relied. In refusing to follow *Fischer,* the district court said it was persuaded by Champion's "augumented evidence" of prior art bleed-type pressure regulators not in evidence in *Fischer.* However, the relevance of such evidence is not apparent, because the bleed feature of the secondary regulator in the Norris '276 patent is not even claimed. To the extent that Judge Hoffman in *Fischer* referred to the bleed feature of the secondary regulator, this, too, would lack relevance. Nevertheless, other evidence in *Fischer was* relevant and clearly supports Judge Hoffman's conclusion of nonobviousness. Thus, after noting that H.G. Fischer's first commercial use of such a primary regulator was in 1959, but that the remote, secondary (air) pressure regulator was not reduced to practice (by Norris) until late December of 1961, Judge Hoffman said (167 U.S.P.Q. at 341):

> A 1960 catalog of the Hannifin Co. and a 1956 catalog of the Norgren Co., both showing pilot controlled air pressure regulators and their use with a remote, pilot regulator.
>
> A 1951 patent to Ransburg (No. 2,559,225) for Electrostatic Coating Method and Apparatus illustrating use of insulated hoses with electrostatic spray coating apparatus.
>
> A 1944 patent to Roselund (No. 2,350,708) for Pan Greasing Machine (assigned to DeVilbiss) and a 1949 instruction book on installation, operation, and maintenance of the DeVilbiss Pan Greaser. These relate to spray-greasing of pans, preliminary to use in baking, using a spray gun and an air pressure control valve for the gun.
>
> There is no showing wherein such prior art is other than cumulative to that considered by the Patent Office during prosecution of the Norris '276 patent. Along with the vertically reciprocating primary pressure regulator in claims 3 and 4 (disclaimed), such prior art does show that all the hardware was available to make the critical subject matter of claims 5 and 6, namely: the stationary, remote, secondary [air] pressure regulator controlling pressure in a primary regulator that "reciprocates through a vertical plane."

> During the intervening period of almost three years, it was necessary to shut down the paint spray equipment in orde: to make an adjustment in the paint spray pressure for most installations. Moreover, Mr. Walberg [assignor of rights in certain patent applications to H.G. Fischer & Company to whom the patents were issued] admitted that there were occasions when it was necessary to adjust the paint pressure regulator of the defendant's equipment by jabbing or poking at the handle of the reciprocating regulator with an object such as a broomstick. This experience of the defendant is wholly inconsistent with its argument that the remote control of a paint pressure regulator would have been obvious to one skilled in the art.

Although we agree with the district court that the holding in *Fischer* is not controlling in this case, *see Jamesbury Corp. v. Litton Industries, Inc.*, 586 F.2d 917, 920-21, n.9 (2d Cir. 1978),[12] we conclude that the statutory presumption of validity of claims 5 and 6 of the Norris '276 patent still stands. Thus, the dispositive question is whether this presumption of validity has been rebutted by Champion. *See Solder Removal Co. v. United*

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12 Gyromat argues that the same collateral estoppel effect be accorded a decision of patent validity as a decision of patent invalidity under *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation*, 402 U.S. 313, 169 U.S.P.Q. 513 (1971). We note that Champion was not a party to the prior action and, therefore, stands in a different posture from that of the patentee in *Blonder-Tongue*. In any event, since a decision of the United States District Court for the Northern District of Illinois is not controlling as a matter of *stare decisis, cf. Mercantile Nat'l Bank of Chicago v. Howmet Corp.*, 524 F.2d 1031, 188 U.S.P.Q. 353 (7th Cir. 1975), *cert. denied*, 424 U.S. 957 (1976), and in view of our disposition of this case, we need not reach this question.

States International Trade Commission, 582 F.2d 628, 632, 199 U.S.P.Q. 129, 133 (CCPA 1978).

Champion's Expert Testimony Insufficient

As earlier pointed out, the district court, in determining the level of skill (in 1962) of a person of ordinary skill in the pertinent art of hydraulics and fluid controls, found the testimony of Champion's expert, Russell Henke, to be persuasive. Mr. Henke, an engineer experienced in hydraulics and fluid control systems, testified that in 1960 or 1961 there were commercially available both manual controlled fluid pressure regulators and remote operated air pressure regulators, and the concept of remote control by air pressure of a fluid pressure regulator was well known. It was his belief that those possessing skill in the art such as he possessed would have had the knowledge and know-how to connect pilot operated regulators for liquid service with a pilot regulator operating on air.[13] He also testified—

> It's my opinion that anybody who would have that knowledge of the field similar to what I might have, would be led to using a remote pilot controlled fluid regulator to solve the problem.
>
> . . . .

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13 Such a statement, of course, is not responsive to the question of whether persons prossessing such skill would have had the knowledge and know-how to connect *vertically reciprocating* pilot operated regulators with a remote pilot regulator. Although the mechanics of connecting the two regulators is not part of the claimed subject matter of the Norris invention, the concept of making such a connection is part of the teaching in the Norris specification of how to practice the invention. Given such teaching, the connecting could be expected to be carried out by the

> It's my feeling that anyone skilled in the prior art we have been discussing would be led to the same approach of applying a remote pilot control on a fluid regulator to solve this problem.

Although, as a general rule, the weight of an expert's testimony is to be determined by the trial court, such a determination may, nevertheless, be shown to have been erroneous. *Universal Athletic Sales Co. v. American Gym, Recreational & Athletic Equipment Corp.*, 546 F.2d 530, 537, 192 U.S.P.Q. 193 (3d Cir. 1976), *cert. denied*, 430 U.S. 984 (1977). We note other factors which detract from the weight of Henke's testimony. He had no experience with paint spraying devices, with which the "on-the-fly" adjustment problem was associated and to which problem the Norris '276 patent was addressed. Moreover, his testimony was often vague. The witness did not define "the problem"; nor did he indicate what (other than the hindsight obtained from the Norris invention) would have led "a person having ordinary skill in the art" of hydraulics and fluid control systems to the "on-the-fly" solution achieved by Norris with respect to a vertically reciprocating fluid pressure regulator. On cross-examination, Mr. Henke was asked whether he had occasion to work with equipment in which there was a vertical movement between a controlled regulator and a controlling regulator. His response was as follows:

> A. I suspect there must be instances where the motion was vertical as opposed to horizontal or rotary.

ordinary mechanic. As related *infra*, Gyromat persons of ordinary skill in the pertinent art were not able to solve the problem of "on-the-fly" adjustment of vertically reciprocating fluid pressure regulators.

Q. What type of thing are you thinking about when you say that?

A. Well, mostly machine motion—I don't have specific examples in mind, but I have worked in general field of machines that are fluid operated or have fluid systems on them and there are motions in these machines, and they could be anything. It could be automation systems, it could be machine tools, they could be different kinds of equipment, construction equipment, agricultural equipment, industrial equipment, in general.

Q. This would involve the use of a vertically reciprocating regulator that was—

A. In some instances, it could, yes.

Q. In some instances? Can you give us a specific example?

A. Not off the top of my head, I can't, no.

Thus, although he had testified that the concept of remote control by air pressure of a fluid pressure regulator was well known in 1960 or 1961, he could not, on November 16, 1976 (date of testimony), think of a single example of his having worked with a *vertically reciprocating* fluid pressure regulator. As we have seen, however, the "on-the-fly" problem Norris solved arose only from prior art vertically reciprocating fluid pressure regulators.[14] Thus, we conclude that the testimony of Mr.

14 Also brought out on Henke's cross-examination was the admission that the prior art, about which he had testified to show the level of skill of a person of ordinary skill in the art in 1960 or 1961, did not disclose vertically reciprocating primary regulators relative to a remote control regulator. As related earlier, the district court found this to be a fact.

Henke was clearly insufficient to support the district court's finding that in 1962 the idea or concept of connecting a pressure regulator to a (vertically) reciprocating fluid regulator required no more than the ordinary skill of a mechanic reasonably knowledgeable in the field of hydraulics and fluid controls.

District Court's Finding Clearly Erroneous

Bearing crucially on a determination of the level of skill of a person of ordinary skill in the art (hydraulics and fluid controls) is the district court's finding, quoted earlier, that there is no evidence that Champion's staff was using a traveling fluid regulator but was unable to come up with a device for remotely controlling it. This was in response to Gyromat's argument, pursued on appeal, that persons of ordinary skill in the art (namely, the research staff of DeVilbiss Company, a division of Champion) were not able to solve the problem of "on-the-fly" adjustment of vertically reciprocating fluid pressure regulators. The following evidence supports Gyromat's argument and contradicts the district court's finding:

1. Deposition testimony of William D. Gauthier, Director of Research and Engineering of DeVilbiss. He had been employed by DeVilbiss since January of 1963, first as Assistant Director of Research, and had been involved in, among other things, work on paint pumps, reciprocators, and gun mounts, with work on a short-stroke reciprocator starting in early 1963.

   Q. In the course of developing a control system for the reciprocating equipment that was being developed by your group, were

various arrangements considered and evaluated for effecting control of paint presssure at the gun—at the spray gun from a remote location, or from any location, for that matter?

A. My recollection is rather hazy in that area. I believe I recall cases where fluid regulators were mounted on the reciprocator, and some mechanical linkage was evolved to provide the adjustment.

. . . .

Q. Do you remember what it looks like or what it looked like, rather?

A. My recollection was just some insulating rods . . . with universal joints at either end connected from the reciprocator to a remote location.

Q. Was equipment ever built and delivered commercially using such an arrangement for control of paint pressure?

A. No.

2. Deposition testimony of Robert J. Della Flora, a Senior Project Engineer in the Research Group of DeVilbiss. He had been employed by DeVilbiss since April of 1960, first as a Project Engineer, and had been involved in, among other things, paint pumps and some work on control systems for reciprocators and associated equipment and some work on guns.

   Q. Did your work on the reciprocator commence at around the time that Mr. Gauthier came with the company?

A. Yes.

. . . .

Q. What does this report, or what does this document marked as Defendant's Exhibit 20 represent, Mr. Della Flora?[15]

A. A report on possible methods of controlling paint flow. . . .

Q. To whom did you hand the report in, do you recall?

. . . .

A. I believe it went to Mr. Gauthier.

. . . .

Q. Did this work that is reflected in document Defendant's Exhibit 20, relate to the very first prototype reciprocator that you worked on?

. . . .

A. It was a separate item. It didn't refer to the reciprocator.

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15 Exhibit 20 is a report by R.J. Della Flora, dated 10/23/63, entitled "Paint Feed Control." The "Objective" is stated to be "Develop simplified fluid feed control for air spray guns." Under "Conclusions" it is stated: "A simple satisfactory fluid feed control system consists of the following: . . . 5. Fluid pressure controlled by precision air pressure regulator on pressure pot." Under "Discussion" it is stated: "2. Remote adjustment of the system fluid flow control may be accomplished by using a pump, pressure pot, fluid regulator or needle valve. A pressure pot with a precision air regulator will give accurate flow control if used with accurate flow resistances and is probably the least expensive of these systems. . . . 5. Individual fluid flow control of the guns may be accomplished by using a fixed orifice, micro-adjusting needle valve, fluid regulator, individual pressure pot or individual pump. The pressure pot and pump probably should be eliminated due to cost. . . . With the gun needle valve made small and with a micro-adjusting screw for accurate control of the flow restriction, the needle valve is practical."

Q. Oh, this was not work with respect to a reciprocator?

A. No.

Q. I take it then that it was limited to known reciprocating equipment?

A. It was paint feed control, period. Reciprocated or stationary, no difference.

Q. In other words, it was without regard to whether it was reciprocated or not?

A. Right.

. . . .

Q. Did the investigations that are reflected in Defendant's Exhibit 20 result in any changes in the design of the AGC [paint system using an air atomizing concept] gun, or the paint control for the AGC gun?

A. I think it all developed concurrently.

. . . .

Q. Thank you. Was this paint feed control incorporated in the AGC equipment?

A. No.

. . . .

Q. You discussed . . . the ultimate paint control system that was finally adopted in the AGC system, and I believe you also testified that you did not have anything directly to do with the development of that ultimate system. Do you have any personal knowledge as to where the concept or the

genesis of that remote control fluid regulator came from?

A. All of this was a group effort. The fluid regulator portion was a regulator that we had in our line. The remote air control of this regulator was developed to satisfy a request by the Research Director, Mr. Juvinall to make this unit remotely adjustable without having to turn off the electrical power or stop the reciprocator.

. . . .

Q. Did Mr. Juvinall's request then immediately result in the ultimate system being developed, or did this take some period of time?

A. Today it seems as though it was a step right onto it, but I can't recall how long it did take.

Q. Were any other systems attempted or tried and discarded following this request by Mr. Juvinall and prior to the development of the ultimate system? In other words, were there any false steps along the way, or did the group just go out and put this thing together?

A. I know there were some false starts made, but I can't recall how many or how long they took.

From the foregoing testimony of Mr. Gauthier and Mr. Della Flora, it is clear that the research group at DeVilbiss, commencing early in 1963, was working on development of vertically reciprocating equipment with

fluid regulators mounted on the reciprocator and on development of a paint feed control system for that equipment; that development of the paint feed control system, covered by Della Flora's report of 10/23/63, was carried out without recognition of the "on-the-fly" control problem, much less a solution to it, since it was without regard to any difference between reciprocating and stationary equipment; that the results of Della Flora's investigations were not incorporated into the AGC equipment or commercially developed; that it was not until Juvinall requested that the fluid regulators be adjustable "on-the-fly" that development of remote air control of those regulators was undertaken; and that, even then, "there were some false starts."

Providing still greater support to Gyromat's argument regarding the level of skill of a person of ordinary skill in the pertinent art is a report dated 8/31/64[16] by Erherd Kock, Director of Research and Engineering for DeVilbiss, who, like Gauthier, had been employed by DeVilbiss since January of 1963, first as a senior research engineer, and had been continuously involved in development of paint spray equipment. The report states that the objective of Project No. 39 ("Paint Feed Control") was to develop a suitable means for controlling, with precision and reliability, the paint flow rate for the new DeVilbiss electrostatic system, which consisted of an array of vertically reciprocating spray guns; that it was desirable for the paint flow to be readily adjustable while the system was in operation, *i.e.*, while the guns were at high voltage and reciprocating; further:

> In the early consideration[17] of this problem, fluid regulators had been rejected because of their bulk,

16 The report shows that it was approved by Gauthier on 5/20/65.

17 During oral argument, the parties agreed that this occurred after 1962.

cost and incompatability with quick color change. Further, the use of fluid regulators did not seem to offer an easy solution to the requirement of remote on-the-fly adjustment, because in order to minimize fluid flow fluctuation as the height of the vertically reciprocating gun changed, it would have been necessary to reciprocate the fluid regulators with the guns.

A second approach, consisting of controlling the flow by varying the fluid needle opening was investigated at greater length. It had the obvious advantage of simplicity and low cost, but was finally rejected because it was difficult to control individually on-the-fly . . . .

The fluid control method that was finally selected consisted of a modification of the small "gun-mounted fluid regulator" #44167-008 (which had just become commercially available), the diaphragm pressure of which was adjusted remotely by means of an air pressure regulator. . . . The fluid regulator itself was small enough that it could be mounted on the reciprocator adjacent each gun without creating a weight problem, and it was sufficiently cheap, that one regulator could be supplied for each gun without unduly increasing the cost of the system. The only relatively expensive component was the air regulator (a Norgren regulator was found to give the best performance), one of which had to be used in conjunction with each fluid regulator. However, the resulting ease of remote paint feed control for both conductive and nonconductive paints while the system was in operation, facilitated by the fact that the operator could now select and maintain a given paint flow by

merely adjusting the air pressure regulator . . . seemed to be well worth the additional expense.

Thus, a contemporaneous report shows that the DeVilbiss research group found the requirement for remote "on-the-fly" adjustment to not be easily satisfied when using fluid regulators because they had to be reciprocated with the guns; also, that varying the fluid needle valve opening of the gun (recommended as "practical" by Della Flora, note 16 *supra*) was not satisfactory because of the difficulty of "on-the-fly" control. The solution that was eventually selected was made after Gauthier and Kock had (in 1963) viewed an embodiment of the Norris invention constructed by the Fischer Company.[18]

This report, along with the above-quoted testimony of Gauthier and Della Flora, compels the conclusion that the district court's finding, that there is no evidence that Champion's staff was unable to come up with a device for remotely controlling a traveling regulator, is clearly erroneous.[19] Indeed, the evidence is compellingly to the con-

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18 Champion argues that motivation for remote, "on-the-fly" control of reciprocating pressure regulators would have been provided by the pan greasing machine patent and instructions (note 11, *supra*), wherein remote air pressure control is taught for regulating the flow of hot grease. In addition to the fact that the pan greasing machine does not involve a vertically reciprocating fluid pressure regulator, the argument suffers from the fact that the research group at DeVilbiss, which presumably was familiar with the pan greasing machine since the patent had been assigned to DeVilbiss, was unable to come up with a satisfactory solution to the "on-the-fly" control problem for a year and a half, and that solution was an embodiment of the Norris invention.

19 The district court also said:

It is true that the Fischer personnel, who were using a traveling [vertically reciprocating] fluid regulator, did not solve the problem. However, their failure, for a somewhat brief time, is insufficient to detract from the weight of the plaintiff's credi-

trary. Although early in 1963 the DeVilbiss research group commenced work on a paint feed control system for vertically reciprocating equipment, it was not until a year and a half later that Kock reported a satisfactory solution to the "on-the-fly" control problem, and that solution, which is clearly an embodiment of the Norris invention, was not approved until some nine months later. Accordingly, Champion's argument that the level of skill of a person of ordinary skill in the pertinent art in late December 1961 was such that the Norris invention would have been obvious must fail.

Combination of Old Elements Not Obvious Per Se

Citing *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976), Champion argues that claims 5 and 6 of the Norris '276 patent simply define "an arrangement of old elements," each performing "the same function it had been known to perform," and that such combinations are not patentable. In the factual setting of the *Sakraida* case, we have no difficulty with the holding that the invention there involved was not patentable. However, we do not agree with what amounts to an oblique suggestion that the dicta in the Supreme Court's opinion overruled the statutory test of nonobviousness established by 35 U.S.C. § 103 along with the analytical guidelines for that test established by the Court in *Graham v. John Deere Co.*,

ble testimony that use of a remote-controlled pressure regulator to control the traveling fluid regulator required more than the ordinary skill of a mechanic.

Under the circumstances of this case, we do not regard a period of nearly three years as "somewhat brief" when evaluating the level of skill of a person of ordinary skill in the pertinent art, as distinguished from evaluating the factor of "long felt need." *See Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966).

supra, which the opinion in *Sakraida* cites with approval. *See Republic Industries, Inc. v. Schlage Lock Co.*, 592 F.2d 963, 970, 200 U.S.P.Q. 769, 777 (7th Cir. 1979). Most, if not all, inventions involve a combination of old or known elements. *Shaw v. E.B. & A.C. Whiting Co.*, 417 F.2d 1097, 1102, 163 U.S.P.Q. 580, 584 (2d Cir. 1969), *cert. denied*, 397 U.S. 1076 (1970); *Reiner v. I. Leon Co.*, 285 F.2d 501, 503, 128 U.S.P.Q. 25, 27 (2d Cir. 1960), *cert. denied*, 366 U.S. 929 (1961); *B.G. Corp. v. Walter Kidde & Co.*, 79 F.2d 20, 22, 26 U.S.P.Q. 288, 289-90 (2d Cir. 1935). If the inventions are new, useful, and nonobvious, they are patentable. If the level of skill of a person of ordinary skill in the pertinent art is such that the differences between the subject matter sought to be patented and the prior art would not have been obvious to that person, the test for nonobviousness is met.

In view of all the foregoing, we hold that the statutory presumption of validity of the Norris '276 patent has not been rebutted by Champion.

The judgment of the district court is reversed and the case is remanded for further proceedings consistent with this opinion.

APPENDIX C

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

THE CONSTITUTIONAL PROVISION

Art 1, sec. 8. The Congress shall have power . . . To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.

EXERPTS FROM TITLE 35, UNITED STATES CODE

§101. Inventions patentable.

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

§102. Conditions for patentability; novelty and loss of right to patent.

A person shall be entitled to a patent unless–

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented by the applicant or his legal representatives

or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

§103. Conditions for patentability; non-obvious subject matter.

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.